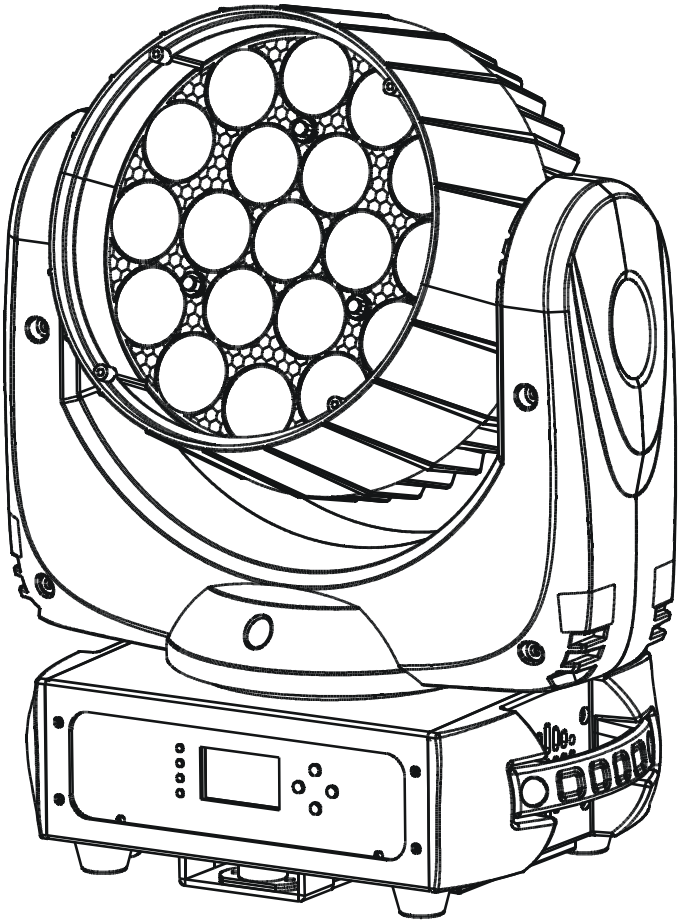
PAGEANT 300



CM-300ZS

User Manual

Professional Entertainment Technology

TABLE OF CONTENTS

1. Safety Instructions 2

2. Technical Specifications 3

3. How To Set The Unit 4

3.1 Control panel 4

3.2 Main Function 5

3.3 Home Position Adjust 13

4. Control By Universal DMX Controller 14

4.1 DMX 512 Connection 14

4.2 Address Setting 15

4.3 DMX 512 Configuration 16

5. Troubleshooting 18

6. Fixture Cleaning 18

1. Safety Instructions

WARNING

Please read carefully the instruction, which includes important information about the installation, usage and maintenance.

- Please keep this User Guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction booklet.
- Unpack and check carefully there is no transportation damage before using the unit.
- Before operating, ensure that the voltage and frequency of power supply match the power requirements of the unit.
- It's important to ground the yellow/green conductor to earth in order to avoid electric shock.
- The unit is for indoor use only. Use only in a dry location.
- The unit must be installed in a location with adequate ventilation, at least 50cm from adjacent surfaces. Be sure that no ventilation slots are blocked.
- Disconnect main power before replacement or servicing.
- Make sure there are no flammable materials close to the unit while operating as it is fire hazard.
- Use safety cable when fixes this unit. DO NOT handle the unit by taking its head only, but always by taking its base.
- Maximum ambient temperature is Ta: 40℃. DO NOT operate it where the temperature is higher than this.
- Unit surface temperature may reach up to 85℃. DO NOT touch the housing bare-hand during its operation. Turn off the power and allow about 15 minutes for the unit to cool down before replacing or serving.
- In the event of serious operating problem, stop using the unit immediately. Never try to repair the unit by yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center. Always use the same type spare parts.
- DO NOT touch any wire during operation as high voltage might be causing electric shock.

Warning:

- To prevent or reduce the risk of electrical shock or fire, do not expose the unit to rain or moisture.
- DO NOT open the unit within five minutes after switching off.
- The housing, the lenses, or the ultraviolet filter must be replaced if they are visibly damaged.

Caution:

There are no user serviceable parts inside the unit. DO NOT open the housing or attempt any repairs yourself. In the unlikely event your unit may require service, please contact your nearest dealer.

If using a 230V 50Hz power supply, DO NOT connect in series more than 11 units; use another main supply for the next 11 fixtures.
If using a 120V 60Hz power supply, DO NOT connect in series more than 5 units; use another main supply for the next 5 fixtures.

Installation:

The unit should be mounted via its screw holes on the bracket. Always ensure that the unit is firmly fixed to avoid vibration and slipping while operating. And make sure that the structure to which you are attaching the unit is secure and is able to support a weight of 10 times of the unit's weight. Also always use a safety cable that can hold 12 times of the weight of the unit when installing the fixture.

The equipment must be fixed by professionals. And it must be fixed at a place where is out of the touch of people and has no one pass by or under it.

2. Technical Specifications

◇ Extremely small, fast and powerful LED moving beam.

◇ DMX Channels: 14 channels mode

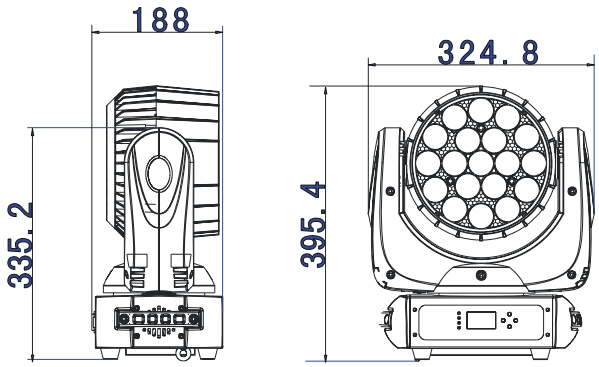
◇ Operation modes: DMX512, Master/Slave

◇ Great built-in lighting shows under Master/Slave mode

◇ Blue LCD display for easy navigation

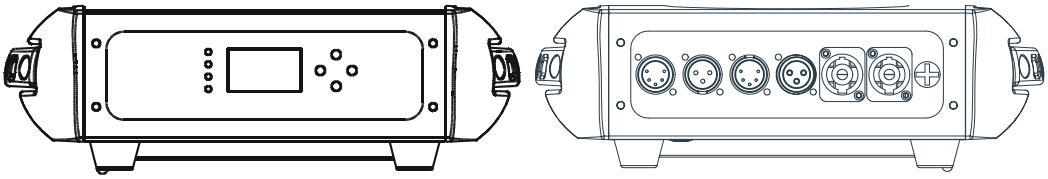
◇ Perfect for stage, theatre, TV studio, rental and discotheques

Voltage: AC 100V~240V, 50/60Hz
Power consumption: 245W
LED: 19 X 10W RGBW LED
Dimension: 324.8X188X395.4mm
Weight: 9.2Kgs
Beam Angel: 10°~60°



3. How To Set The Unit

3.1 Control panel



Display:

To show the various menus and the selected functions

LED:

POWER	ON	Power On
NULL		No function
NULL		No function
DMX	ON	DMX input present

Button:

MENU	To select the programming functions
DOWN	To go backward in the selected functions
UP	To go forward in the selected functions
ENTER	To confirm the selected functions

DMX input:

For DMX512 link, use 3/5-pin XLR cable to link the unit together.

DMX output:

For DMX512 link, use 3/5-pin XLR cable to link the unit together.

Mains input:

Connect to power supply.

Mains output:

Connect to supply power to the next unit.

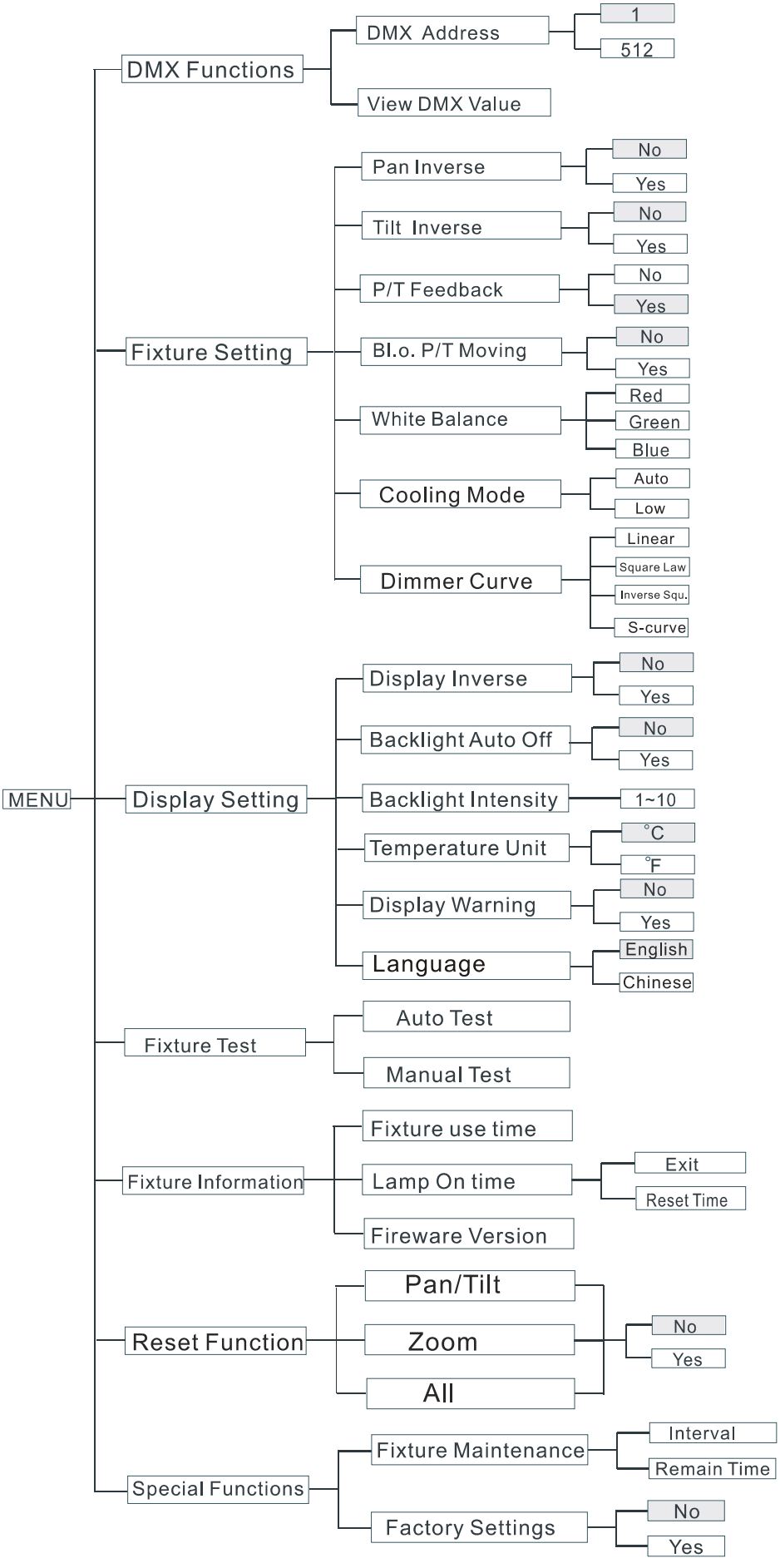
Fuse(T 6.3A**):**

Protect the unit from damage of the over-current.

3.2 Main Function

To select any of the given functions, press the **MENU** button up to when the required one is showing on the display. Select the function by **ENTER** button and the display will blink. Use **DOWN** and **UP** button to change the mode. Once the required mode has been selected, press the **ENTER** button to setup, to go back to the functions without any change press the **MENU** button again. Hold and press the **MENU** button about one second or wait for one minute to exit the menu mode.

The main functions are showing below:


MENU
DMX Functions
DMX Address
1
512
View DMX Value
Fixture Setting
Pan Inverse
No
Yes
Tilt Inverse
No
Yes
P/T Feedback
No
Yes
Bl.o. P/T Moving
No
Yes
White Balance
Red
Green
Blue
Cooling Mode
Auto
Low
Dimmer Curve
Linear
Square Law
Inverse Squ.
S-curve
Display Setting
Display Inverse
No
Yes
Backlight Auto Off
No
Yes
Backlight Intensity
1~10
Temperature Unit
°C
°F
Display Warning
No
Yes
Language
English
Chinese
Fixture Test
Auto Test
Manual Test
Fixture Information
Fixture use time
Lamp On time
Exit
Reset Time
Fireware Version
Reset Function
Pan/Tilt
Zoom
All
No
Yes
Special Functions
Fixture Maintenance
Interval
Remain Time
Factory Settings
No
Yes

DMX Functions

Enter MENU mode, select ***DMX Functions***, press ENTER button to confirm, use UP and DOWN button to select ***DMX Address***, ***DMX Channel Mode*** or ***View DMX Value***.

DMX Address

Select **DMX Address**, press ENTER button to confirm, the present address will blink on the display, use UP and DOWN button to adjust the address from **1** to **512**, press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

View DMX Value

Select **View DMX Value**, press ENTER button to confirm. Channel function and its value will show on the display, use UP and DOWN button to view other DMX value. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Fixture Setting

Enter MENU mode, select ***Fixture Setting***, press ENTER button to confirm, then use UP and DOWN button to select ***Pan Inverse, Tile Inverse, P/T Feedback***, ***BL.O. P/T Moving, White Balance, Cooling Mode*** *or* ***Dimmer Curve***.

Pan Inverse

Select **Pan Inverse**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **No** (normal) or **Yes** (pan inverse), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Tilt Inverse

Select **Tilt Inverse**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **No** (normal) or **Yes** (tilt inverse), press

ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

P/T Feedback — Pan/Tilt Feedback

Select **P/T Feedback**, press ENTER button to confirm, present mode will blink on the display, press UP/DOWN button to select **No** (Pan or tilt's position will not feedback while out of step) or **Yes** (Feedback while pan/tilt out of step), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

BL.O. P/T Moving— Blackout while pan/tilt moving

Select **BL.O. P/T Moving**, Press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **No** (normal while pan/tilt moving) or **Yes** (blackout while pan/tilt moving), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

White Balance

Select **White Balance**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **Red**, **Green** or **Blue**, Once selected, press ENTER button, then use UP and DOWN button to adjust the value from 125 to 255, press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

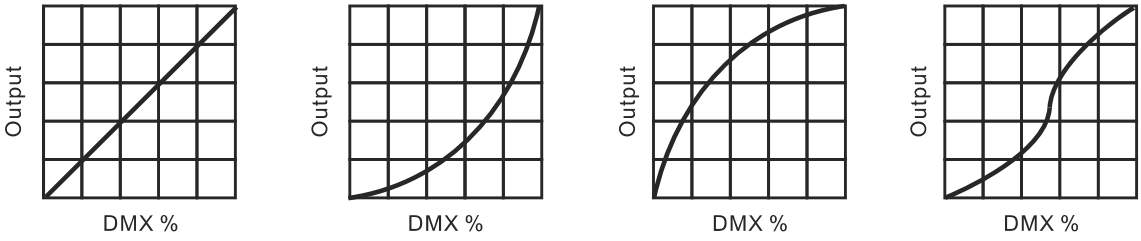
Cooling Mode

Select **Cooling Mode**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **Auto** (Normal) or **Low** (Low speed), Once selected, press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Dimmer Curve

Select **Dimmer Curve**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **Linear**, **Square Law**, **Inverse Squ.** or **S-curve**, Once selected, press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Dimmer Modes



Linear: The increase in light intensity appears to be linear as DMX value is increased.

Square Law: Light intensity control is finer at low levels and coarser at high levels.

Inverse Square Law: Light intensity control is coarser at low levels and finger at high levels.

S-cure: Light intensity control is finger at low levels and high levels and coarser at medium levels.

Display Setting

Enter MENU mode, select ***Display Setting***, press ENTER button to confirm, use UP and DOWN button to select ***Display Inverse, Backlight Auto Off, Backlight Intensity*** **,*Temperature unit,*** **Display Warning** *or* ***Language.***

Display Inverse

Select **Display Inverse**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **No** (normal display) or **Yes** (inverse display), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Backlight Auto Off

Select **Backlight Auto Off**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **No** (display always on) or **Yes** (display goes off one minute after exiting menu mode), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Backlight Intensity

Select **Backlight Intensity**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to adjust backlight intensity from **1** (dark) to **10** (bright), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Temperature Unit

Select **Temperature Unit**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select ℃ or ℉, press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Display Warning

Select **Display Warning**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **No** (Normal) or **Yes** (display will show the error warning when the unit went wrong). Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Language

Select **Language**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **English** or **Chinese**. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Fixture Test

Enter MENU mode, select ***Fixture Test***, press ENTER button to confirm, use UP and DOWN button to select ***Auto Test*** or ***Manual Test***

Auto Test

Select **Auto Test**, press ENTER button to confirm, the unit will run built-in programs to automatically test pan, tilt, color, gobo, shutter, dimmer, prism, red, green, blue, white, CTC, frost, focus, and lamp on/off. Press MENU button back to the last menu or exit menu mode after auto test.

Manual Test

Select **Manual Test**, press ENTER button to confirm, the present channel will show on the display, use Up and DOWN button to select channel, press ENTER button to confirm, then use UP and DOWN button to adjust the value, press ENTER button to store, the fixture will run as the channel value indicates. Press MENU button back to the last menu or exit menu mode let the unit idle one minute.
(All channels value will become 0 after exiting Manual Test menu)

Fixture Information

Enter MENU mode, select ***Fixture Information***, press ENTER button to confirm, use UP and DOWN button to select ***Fixture use time, Lamp on tme*** or ***Firmware Version.***

Fixture use time

Select **Fixture Use Time**, press ENTER button to confirm, fixture use time will show on the display, press MENU button to exit.

Lamp on time

Select **Lamp on time**, press ENTER button to confirm, lamp on time will show on the display, press ENTER button to confirm, use UP and DOWN button to select **Exit** or

Reset Time, press ENTER button to confirm. Press MENU button back to the last menu or exit menu mode let the unit idle one minute.

Firmware Version

Select **Firmware Version**, press ENTER button to confirm, firmware version will show on the display, press MENU button back to exit.

Reset Functions

Enter MENU mode, select ***Reset Function***, press ENTER button to confirm, use UP and DOWN button to select ***Pan/Tilt,* Zoom** or ***All.***

Pan/Tilt— Reset Pan/Tilt

Select **Pan/Tilt**, press ENTER button to confirm, use UP and DOWN button to select **Yes** (the unit will run built-in program to reset pan and tilt to their home positions) or **No**, press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Zoom— Reset Zoom

Select **Zoom**, press ENTER button to confirm, use UP and DOWN button to select **Yes** (the unit will run built-in program to reset ***Zoom*** to their home positions) or **No**, press ENTER button to store. Press MENU button to exit.

All— Reset All

Select **All,** press ENTER button to confirm, use UP and DOWN button to select **Yes** (the unit will run built-in program to reset all motors to their home positions) or **No**, press ENTER button to store. Press MENU button to exit.

Special Functions

Enter MENU mode, select ***Special Functions***, press ENTER button to confirm, use UP and DOWN button to select ***Fixture Maintenance*** or ***Factory Setting.***

Fixture Maintenance

Select **Fixture Maintenance**, press ENTER button to confirm, use UP and DOWN button to select **Interval** or **Remain Time**.

Interval

Select **Interval,** press ENTER button to confirm, the interval time will show on the display. Press MENU button to exit.

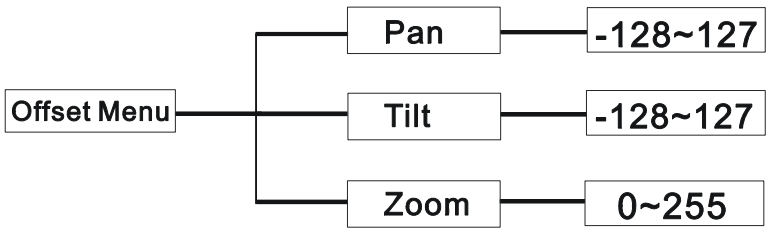
Remain Time

Select **Remain Time,** press ENTER button to confirm, the remaining time will show on the display, press ENTER button to confirm, use UP and DOWN button to select **Exit** or **Reset time**, press MENU button to exit.

Factory Setting

Select **Factory Setting**, press ENTER button to confirm, the fixture will reset to factory settings and exit menu mode.

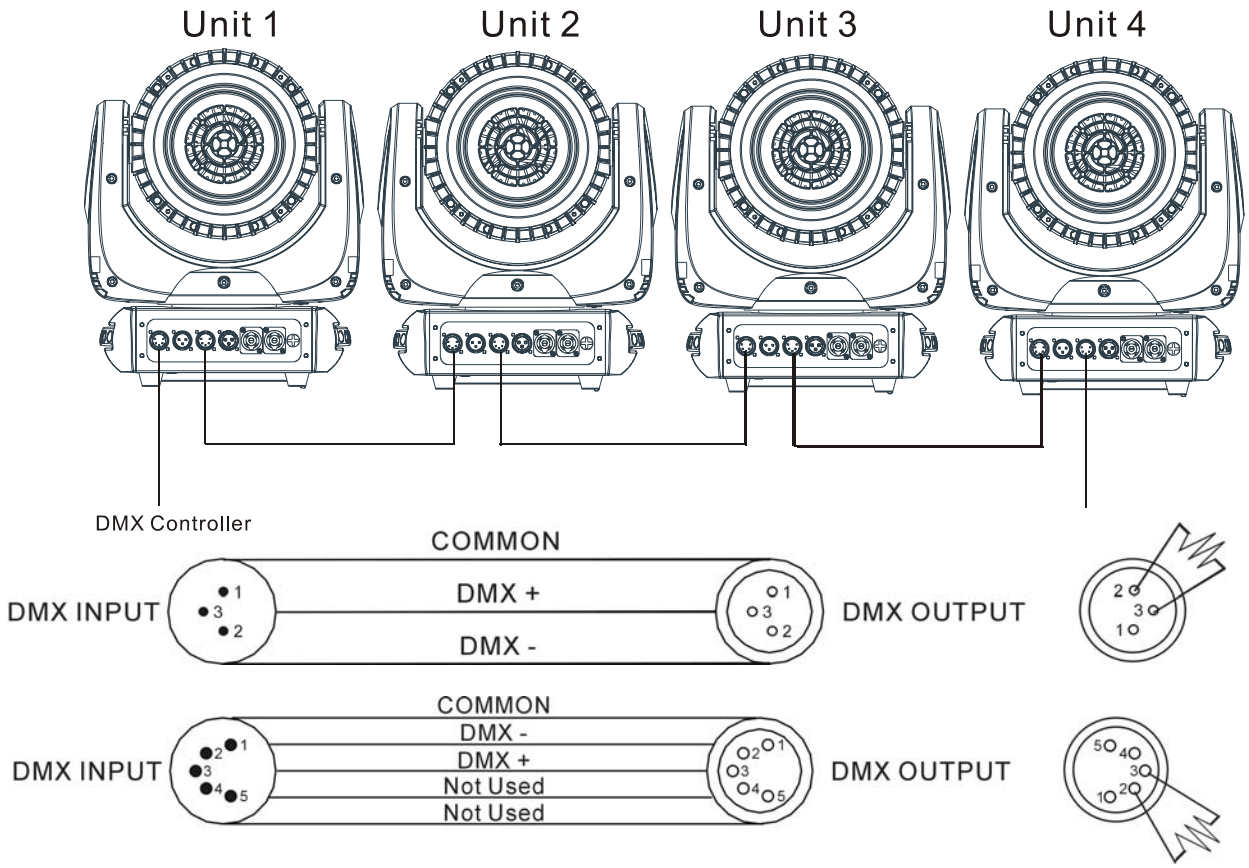
3.3 Home Position Adjust



In the main functions, hold **Enter** button for at least 3 seconds into offset mode, use **DOWN** and **UP** button up to chose **Pan Offset**, **Tilt Offset** or **Zoom** Offset, pressing **ENTER** button and the display will blink. Use **DOWN** and **UP** button to adjust the home position of the Pan, Tilt or Zoom, Once the position has been selected, press the **ENTER** button to setup, to go back to the functions without any change press the **MENU** button again. Hold and press the **MENU** button about one second or wait for one minute to exit the menu mode.

4. Control By Universal DMX Controller

4.1 DMX 512 Connection



1. If you using a controller with 5 pins DMX output, you need to use a 5 to 3 pin adapter-cable.
2. At last unit, the DMX cable has to be terminated with a terminator. Solder a 120 ohm 1/4W resistor between pin 2(DMX-) and pin 3(DMX+) into a 3-pin XLR-plug and plug it in the DMX-output of the last unit.
3. Connect the unit together in a `daisy chain` by XLR plug from the output of the unit to the input of the next unit. The cable can not branched or split to a `Y` cable. DMX 512 is a very high-speed signal. Inadequate or damaged cables, soldered joints or corroded connectors can easily distort the signal and shut down the system.
4. The DMX output and input connectors are pass-through to maintain the DMX circuit, when one of the units' power is disconnected.
5. Each lighting unit needs to have an address set to receive the data sent by the controller. The address number is between 0-511 (usually 0 & 1 are equal to 1).

6. The end of the DMX 512 system should be terminated to reduce signal errors.
7. 3 pin XLR connectors are more popular than 5 pin XLR.
   3 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+)
   5 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+), Pin 4/Pin 5: Not used.

4.2 Address Setting

If you use a universal DMX controller to control the units, you have to set DMX address from 1 to 512 so that the units can receive DMX signal.

Press **MENU** button to enter menu mode, select ***DMX Functions***, press **ENTER** button to confirm, use **UP** and **DOWN** button to select ***DMX Address***, press **ENTER** button to confirm, the present address will blink on the display, use **UP** and **DOWN** button to adjust the address from 0 to 512, press **ENTER** button to store. Press **MENU** button back to the last menu or let the unit idle 7 seconds to exit menu mode.

Please refer to the following diagram to address your DMX512 channel for the first 4 units：

Channel mode	Unit 1 Address	Unit 2 Address	Unit 3 Address	Unit 4 Address
14 channels	1	15	29	43

4.3 DMX 512 Configuration

14 channel mode:

14 Channels

Ch1	Ch2	Ch3	Ch4	Ch5	Ch6	Ch7
Pan	Pan Fine	Tilt	Tilt Fine	P/T Speed	Reset	Dimmer
255 540° 0 0°	255 0	255 220° 0 0°	255 0	255 Slow 0 Fast	015-255 No function 010-014 Reset all 000-009 No function	255 100% 0 0%

Ch8	Ch9	Ch10	Ch11	Ch12
Shutter	Beam Red	Beam Green	Beam Blue	Beam White
245-255 open 230-244 burst 225-229 open 210-224 sine wave 205-209 open 190-204 random burst pulse 185-189 open 170-184 burst pulse 165-169 open 150-164 random closing pulse 145-149 open 130-144 random opening pulse 125-129 open 110-124 random strobe 105-109 open 090-104 closing pulse 085-089 open 070-084 opening pulse 065-069 open 025-064 strobe 020-024 open 000-019 closed	255 100% 0 0%	255 100% 0 0%	255 100% 0 0%	255 100% 0 0%

Ch 13	Color wheel effect	
	000-009	Open
	010-014	LEE 790 - Moroccan pink
	015-019	LEE 157 - pink
	020-024	LEE 332 - Special rose pink
	025-029	LEE 328 - Follies pink
	030-034	LEE 345 - Fuchsia pink
	035-039	LEE 194 - Surprise pink
	040-044	LEE 181 - Congo blue
	045-049	LEE 071 - Tokyo blue
	050-054	LEE 120 - Deep blue
	055-059	LEE 079 - Just blue
	060-064	LEE 132 - Medium blue
	065-069	LEE 200 - Double CT blue
	070-074	LEE 161 - State blue
	075-079	LEE 201 - Full CT blue
	080-084	LEE 202 - Half CT blue
	085-089	LEE 117 - Steel blue
	090-094	LEE 353 - Lighter blue
	095-099	LEE 118 - Light blue
	100-104	LEE 116 - Medium blue green
	105-109	LEE 124 - Dark green
	110-114	LEE 139 - Primary green
	115-119	LEE 089 - Moss green
	120-124	LEE 122 - Fern green
	125-129	LEE 738 - JAS green
	130-134	LEE 088 - Lime green
	135-139	LEE 100 - Spring yellow
	140-144	LEE 104 - Deep amber
	145-149	LEE 179 - Chrome orange
	150-154	LEE 105 - Orange
	155-159	LEE 021 - Gold amber
	160-164	LEE 778 - Millennium gold
	165-169	LEE 135 - Deep gold amber
	170-174	LEE 164 - Flame red
	175-179	Open
	Color wheel rotation effect	
	180-201	Clockwise, fast to slow
	202-207	Stop(this will stop wherever the color is at the time)
	208-229	Counter-clockwise, slow to fast
	230-234	Open
	Random color	
	235-239	Fast
	240-244	Medium
	245-249	Slow
	250-255	Open
Ch 14	Zoom	
	000-255	

5. Troubleshooting

Following are a few common problems that may occur during operation. Here are some suggestions for easy troubleshooting:

A. The unit does not work, no light and the fan does not work

1. Check the connection of power and main fuse.
2. Measure the mains voltage on the main connector.
3. Check the power on LED.

B. Not responding to DMX controller

1. DMX LED should be on. If not, check DMX connectors, cables to see if link properly.
2. If the DMX LED is on and no response to the channel, check the address settings and DMX polarity.
3. If you have intermittent DMX signal problems, check the pins on connectors or on PCB of the unit or the previous one.
4. Try to use another DMX controller.
5. Check if the DMX cables run near or run alongside to high voltage cables that may cause damage or interference to DMX interface circuit.

C. One of the channels is not working well

1. The stepper motor might be damaged or the cable connected to the PCB is broken.
2. The motor’s drive IC on the PCB might be out of condition.

6. Fixture Cleaning

The cleaning of internal and external optical lenses and/or mirrors must be carried out periodically to optimize light output. Cleaning frequency depends on the environment in which the fixture operates: damp, smoky or particularly dirty surrounding can cause greater accumulation of dirt on the unit’s optics.

- Clean with soft cloth using normal glass cleaning fluid.
- Always dry the parts carefully.
- Clean the external optics at least every 20 days. Clean the internal optics at least every 30/60 days.

Innovation, Quality, Performance